

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A method for representing data associable with intervals, the method comprising:

associating a frame with each of a number of intervals in a period;

identifying a first data characteristic to be identified for data associable with the number of intervals in the period, the first data characteristic being based on a variation from an expected quantity;

mining the data associable with the number of intervals in the period to identify a number of first significant intervals, the first significant intervals being intervals for which the first data characteristic is manifested in data associated with each of the first significant intervals; and

presenting in the frame associated with each of the first significant intervals a first representation of the data indicative of the first data characteristic, wherein the frame comprises a rectangular area and wherein the first representation comprises one or more rectangular columns adjacently disposed within at least a portion of the rectangular area, the one or more rectangular columns having a first visual characteristic.

2. (Previously Presented) The method of Claim 1, wherein the first representation comprises a perimeter boundable by a pair of contiguous rectangles, the pair of contiguous rectangles including a first rectangle and a second rectangle having a different area than the first rectangle.

3. (Previously Presented) The method of Claim 1, wherein each interval includes a day and the period includes at least one week such that the frames are presented in a week table having days listed along a first axis and days of a week listed along a second axis.

4. (Previously Presented) The method of Claim 1, wherein each interval includes a day and the period includes at least one month such that the frames are presented in a month table having days of a week listed along a first axis and at least one week listed along a second axis.

5. (Original) The method of Claim 4, wherein the interval includes a day and the period includes at least one year such that the frames are presented in a plurality of month tables.

6. (Previously Presented) The method of Claim 1, wherein mining the data includes identifying at least one streak having a plurality of adjacent first significant intervals.

7. (Previously Presented) The method of Claim 1, wherein the expected quantity includes at least one of an expected number, an expected range, a control limit, and a standard deviation.

8. (Previously Presented) The method of Claim 6, further comprising:

identifying a second data characteristic for time-related data based on a second variation from the expected quantity;

mining the time-related data to identify a number of second significant intervals for which the second data characteristic is manifested in time-related data associated with each of the second significant intervals; and

presenting in the frame associated with each of the second significant intervals a second representation of the time-related data indicative of the second data characteristic, wherein the second representation comprises one or more adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic.

9. (Previously Presented) The method of Claim 8, wherein mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals.

10. (Previously Presented) The method of Claim 1 wherein the variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the intervals varies from the expected quantity.

11. (Original) The method of Claim 1, wherein presenting the first representation of the first data characteristic includes:

determining a maximum number of points displayable within the frame;

determining a number of points representative of a data quantity associable with each interval, wherein a proportion of the number of points to the maximum number of points represents a relative magnitude of the first data quantity; and

contiguously displaying the number of points in the frame for each of the intervals.

12. (Previously Presented) The method of Claim 1, wherein the at least one data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement.

13. (Previously Presented) The method of Claim 12, wherein the vehicle comprises an aircraft.

14. (Original) The method of Claim 11, wherein a proportion of the number of points to the maximum number of points approximately equals a proportion of the data quantity to a data quantity limit.

15. (Original) The method of Claim 11, further comprising approximately equating the data quantity limit to the maximum number of points.

16. (Original) The method of Claim 15, further comprising approximately equating the data quantity limit to a maximum of the data quantity for the period.

17. (Original) The method of Claim 1, further comprising presenting the first representation of the data associated with each of the first significant intervals in a first format including at least one of a color and a fill pattern, the first format being different from that of the frame and other representations within the frame.

18. (Original) The method of Claim 17, wherein the first format is user-selectable.

19. (Original) The method of Claim 1, further including:

identifying at least one additional data characteristic to be identified for the data
associable with the number of intervals in the period;

mining the body of data to identify a number of additional significant intervals, the
additional significant intervals being intervals for which the at least one additional
data characteristic is manifested in data associated with each of the additional
significant intervals; and

presenting in the frame associated with each of the additional significant intervals an
additional representation of the additional data characteristic such that the
additional representation of the additional data characteristic is distinguishable
from the first representation.

20. (Original) The method of Claim 1, wherein the data indicative of the first data
characteristic includes data representative of a plurality of data sources and the data
representative of the plurality of data sources is presented using a unified representation
format.

21. (Previously Presented) A method for representing data associable with intervals, the method comprising:

associating a frame with each of a number of intervals in a time period;

receiving at least one data characteristic from a user for which the user desires the at least one data characteristic be identified in data associable with the number of intervals in the time period, the at least one data characteristic being based on a variation from an expected quantity;

mining the data to identify a number of significant intervals, the significant intervals being intervals for which the at least one data characteristic is manifested in data associated with each of the first significant intervals; and

presenting in the frame associated with each of the first significant intervals a first representation of the data such that the first representation is different from that of the frame and other representations within the frame, wherein the frame comprises a rectangular area and wherein the first representation comprises one or more rectangular columns adjacently disposed within at least a portion of the rectangular area, the one or more rectangular columns having a first visual characteristic, and wherein the first representation includes:

determining a first number of points representative of a first data quantity associable with each interval, wherein a proportion of the first number of points to the maximum number of points represents a relative magnitude of the first data quantity; and

contiguously displaying the first number of points as the one or more rectangular columns in the frame for each of the intervals.

22. (Previously Presented) The method of Claim 21, wherein the first

representation comprises a perimeter boundable by a pair of contiguous rectangles, the pair of contiguous rectangles including a first rectangle and a second rectangle having a different area than the first rectangle.

23. (Previously Presented) The method of Claim 21, wherein each interval includes a day and the period includes at least one week such that the frames are presented in a week table having days listed along a first axis and days of a week listed along a second axis.

24. (Previously Presented) The method of Claim 21, wherein each interval includes a day and the period includes at least one month such that the frames are presented in a month table having days of a week listed along a first axis and at least one week listed along a second axis.

25. (Original) The method of Claim 24, wherein each interval includes a day and the period includes at least one year such that the frames are presented in a plurality of month tables.

26. (Previously Presented) The method of Claim 21, wherein mining the data includes identifying at least one streak having a plurality of adjacent first significant intervals.

27. (Previously Presented) The method of Claim 21, wherein the expected quantity includes at least one of an expected number, an expected range, and a standard deviation.

28. (Previously Presented) The method of Claim 26, wherein the at least one data characteristic comprises a first data characteristic based on a first variation from the expected quantity, the method further comprising:

identifying a second data characteristic based on a second variation from the expected quantity;

mining the data to identify a number of second significant intervals for which the second data characteristic is manifested in data associated with each of the second significant intervals; and

presenting in the frame associated with each of the second significant intervals a second representation of the data indicative of the second data characteristic, wherein the second representation comprises one or more adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic.

29. (Previously Presented) The method of Claim 28, wherein mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals.

30. (Previously Presented) The method of Claim 21, wherein the variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the intervals varies from the expected quantity.

31. (Previously Presented) The method of Claim 21, wherein the at least one data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement.

32. (Previously Presented) The method of Claim 31, wherein the vehicle comprises an aircraft.

33. (Original) The method of Claim 21, wherein a proportion of the first number of points to the maximum number of points approximately equals a proportion of the first data quantity to a first data quantity limit.

34. (Original) The method of Claim 21, further comprising approximately equating the first data quantity limit to the maximum number of points.

35. (Original) The method of Claim 34, further comprising approximately equating the first data quantity limit to a maximum of the first data quantity for the period.

36. (Original) The method of Claim 21, wherein the data indicative of the first data characteristic includes data representative of a plurality of data sources and the data representative of the plurality of data sources is presented using a unified representation format.

37. (Previously Presented) A computer-readable medium for representing data associable with intervals, the computer-readable medium comprising:

a first computer program portion configured to associate a frame with each of a number of intervals in a period;

a second computer program portion configured to identify a first data characteristic to be identified for data associable with the number of intervals in the period, the first data characteristic being based on a variation from an expected quantity;

a third computer program portion configured to mine the body of data to identify a number of first significant intervals, the first significant intervals being intervals for which the first data characteristic is manifested in data associated with each of the first significant intervals; and

a fourth computer program portion configured to present in the frame associated with each of the first significant intervals a first representation of the data indicative of the first data characteristic, wherein the frame comprises a rectangular area and wherein the first representation comprises one or more rectangular columns adjacently disposed within at least a portion of the rectangular area, the one or more rectangular columns having a first visual characteristic.

38. (Previously Presented) The computer-readable medium of Claim 37, wherein the first representation comprises a perimeter boundable by a pair of contiguous rectangles, the pair of contiguous rectangles includes a first rectangle and a second rectangle having a different area than the first rectangle.

39. (Previously Presented) The computer-readable medium of Claim 37, wherein each interval includes a day and the period includes at least one week such that the frames are presented in a week table having days listed along a first axis and days of a week listed along a second axis.

40. (Previously Presented) The computer-readable medium of Claim 37, wherein each interval includes a day and the period includes at least one month such that the frames are presented in a month table having days of a week listed along a first axis and at least one week listed along a second axis.

41. (Original) The computer-readable medium of Claim 40, wherein each interval includes a day and the period includes at least one year such that the frames are presented in a plurality of month tables.

42. (Previously Presented) The computer-readable medium of Claim 37, wherein mining the data includes identifying at least one streak having a plurality of adjacent first significant intervals.

43. (Previously Presented) The computer-readable medium of Claim 37, wherein the expected quantity includes at least one of an expected number, an expected range, and a standard deviation.

44. (Previously Presented) The computer-readable medium of Claim 42, further comprising:

identifying a second data characteristic for time related data based on a second variation from the expected quantity;

mining the data to identify a number of second significant intervals for which the second data characteristic is manifested in time-related data associated with each of the second significant intervals; and

presenting in the frame associated with each of the second significant intervals a second representation of the time-related data indicative of the second data characteristic, wherein the second representation comprises one or more adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic.

45. (Previously Presented) The computer-readable medium of Claim 44, wherein mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals.

46. (Previously Presented) The computer-readable medium of Claim 37, wherein variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the intervals varies from the expected quantity.

47. (Original) The computer-readable medium of Claim 37, wherein presenting the first representation of the first data characteristic includes:

a fifth computer program portion adapted to determine a maximum number of points displayable within the frame;

a sixth computer program portion adapted to determine a number of points representative of a data quantity associable with each interval, wherein a proportion of the number of points to the maximum number of points represents a relative magnitude of the first data quantity; and

a seventh computer program portion adapted to contiguously display the number of points in the frame for each of the intervals.

48. (Previously Presented) The computer-readable medium of Claim 37, wherein the first data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement.

49. (Previously Presented) The computer-readable medium of Claim 48, wherein the vehicle comprises an aircraft.

50. (Original) The computer-readable medium of Claim 49, wherein a proportion of the number of points to the maximum number of points approximately equals a proportion of the data quantity to a data quantity limit.

51. (Original) The computer-readable medium of Claim 47, further comprising an eighth computer program portion adapted to approximately equate the data quantity limit to the maximum number of points.

52. (Original) The computer-readable medium of Claim 51, further comprising a ninth computer program portion adapted to approximately equate the data quantity limit to a maximum of the data quantity for the period.

53. (Original) The computer-readable medium of Claim 37, further comprising a tenth computer program portion adapted to present the first representation of the data associated with each of the first significant intervals in a first format including at least one of a color and a fill pattern, the first format being different from that of the frame and other representations within the frame.

54. (Original) The computer-readable medium of Claim 53, wherein the first format is user-selectable.

55. (Original) The computer-readable medium of Claim 37, further including:

an eleventh computer program portion adapted to identify at least one additional data characteristic to be identified for the data associable with the number of intervals in the period;

a twelfth computer program portion adapted to mine the body of data to identify a number of additional significant intervals, the additional significant intervals being intervals for which the at least one additional data characteristic is manifested in data associated with each of the additional significant intervals; and

a thirteenth computer program portion adapted to present in the frame associated with each of the additional significant intervals an additional representation of the additional data characteristic such that the additional representation of the additional data characteristic is distinguishable from the first representation.

56. (Original) The computer-readable medium of Claim 37, wherein the data indicative of the first data characteristic includes data representative of a plurality of data sources, and further comprising a fourteenth computer program code portion such that the data representative of the plurality of data sources is presented using a unified representation format.

57. (Previously Presented) A computer-readable medium for representing data associable with intervals, the computer-readable medium comprising:

- a first computer program portion configured to associate a frame with each of a number of intervals in a period;
- a second computer program portion configured to receive at least one data characteristic from a user for which the user desires the at least one data characteristic be identified in data associable with the number of intervals in the period, the at least one data characteristic being based on a variation from an expected quantity;
- a third computer program portion configured to mine the body of data to identify a number of significant intervals, the significant intervals being intervals for which the at least one data characteristic is manifested in data associated with each of the first significant intervals; and
- a fourth computer program portion configured to present in the frame associated with each of the first significant intervals a first representation of the data such that the first representation is different from that of the frame and other representations within the frame, wherein the frame comprises a rectangular area and wherein the first representation comprises one or more rectangular columns adjacently disposed within at least a portion of the rectangular area, the one or more rectangular columns having a first visual characteristic, and wherein the first representation includes:
 - a fifth computer program portion configured to determine a first number of points representative of a first data quantity associable with each interval, wherein a

proportion of the first number of points to the maximum number of points represents a relative magnitude of the first data quantity; and

a sixth computer program portion configured to contiguously display the first number of points in the frame for each of the intervals.

58. (Previously Presented) The computer-readable medium of Claim 57, wherein the first representation comprises a perimeter boundable by a pair of contiguous rectangles, the pair of contiguous rectangles includes a first rectangle and a second rectangle having a different area than the first rectangle.

59. (Previously Presented) The computer-readable medium of Claim 57, wherein each interval includes a day and the period includes at least one week such that the frames are presented in a week table having days listed along a first axis and days of a week listed along a second axis.

60. (Previously Presented) The computer-readable medium of Claim 57, wherein each interval includes a day and the period includes at least one month such that the frames are presented in a month table having days of a week listed along a first axis and at least one week listed along a second axis.

61. (Original) The computer-readable medium of Claim 60, wherein each interval includes a day and the period includes at least one year such that the frames are presented in a plurality of month tables.

62. (Previously Presented) The computer-readable medium of Claim 57, wherein mining the data includes identifying at least one streak having a plurality of adjacent first significant intervals.

63. (Previously Presented) The computer-readable medium of Claim 57, wherein the expected quantity includes at least one of an expected number, an expected range, and a standard deviation.

64. (Previously Presented) The computer-readable medium of Claim 62, wherein the at least one data characteristic comprises a first data characteristic based on a first variation from the expected quantity, the method further comprising:

identifying a second data characteristic based on a second variation from the expected quantity;

mining the data to identify a number of second significant intervals for which the second data characteristic is manifested in data associated with each of the second significant intervals; and

presenting in the frame associated with each of the second significant intervals a second representation of the data indicative of the second data characteristic., wherein the second representation comprises one or more adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic.

65. (Previously Presented) The computer-readable medium of Claim 64, wherein mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals.

66. (Previously Presented) The computer-readable medium of Claim 57, wherein the variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the intervals varies from the expected quantity.

67. (Previously Presented) The computer-readable medium of Claim 57, wherein the at least one data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement.

68. (Previously Presented) The computer-readable medium of Claim 67, wherein

the vehicle comprises an aircraft.

69. (Original) The computer-readable medium of Claim 57, wherein a proportion of the first number of points to the maximum number of points approximately equals a proportion of the first data quantity to a first data quantity limit.

70. (Original) The computer-readable medium of Claim 57, further comprising a seventh computer program portion adapted to approximately equate the first data quantity limit to the maximum number of points.

71. (Original) The computer-readable medium of Claim 70, further comprising an eighth computer program portion adapted to approximately equate the first data quantity limit to a maximum of the first data quantity for the period.

72. (Original) The computer-readable medium of Claim 57, wherein the data indicative of the first data characteristic includes data representative of a plurality of data sources, and further comprising a ninth computer program code portion such that the data representative of the plurality of data sources is presented using a unified representation format.

73. (Currently amended) A system for representing data associable with intervals, the system comprising:

~~means for associating a frame presenter configured to associate a frame with each of~~
a number of intervals in a period;

~~means for identifying an identifier configured to identify a first data characteristic to be~~
identified for data associable with the number of intervals in the period, the first
data characteristic being based on a variation from an expected quantity;

a data mining system configured to mine the body of data associable with the number
of intervals in the time period to identify a number of first significant intervals, the

first significant intervals being intervals for which the first data characteristic is manifested in data associated with each of the first significant intervals; and

a display apparatus configured to present in the frame associated with each of the first significant intervals a first representation of the data indicative of the first data characteristic, wherein the frame comprises a rectangular area and wherein the first representation comprises one or more rectangular columns adjacently disposed within at least a portion of the rectangular area, the one or more rectangular columns having a first visual characteristic.

74. (Previously Presented) The system of Claim 73, wherein mining the data includes identifying at least one streak having a plurality of adjacent first significant intervals.

75. (Previously Presented) The system of Claim 73, wherein the expected quantity includes at least one of an expected number, an expected range, and a standard deviation.

76. (Previously Presented) The system of Claim 74, further comprising:

identifying a second data characteristic for time-related data based on a second variation from the expected quantity;,

mining the time-related data to identify a number of second significant intervals for which the second data characteristic is manifested in time-related data associated with each of the second significant intervals; and

presenting in the frame associated with each of the second significant intervals a second representation of the time-related data indicative of the second data characteristic, wherein the second representation comprises one or more adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic.

77. (Previously Presented) The system of Claim 76 , wherein mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals.

78. (Previously Presented) The system of Claim 73, wherein the variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the intervals varies from the expected quantity.

79. (Original) The system of Claim 73, wherein the system further includes a representation determiner, the representation determiner being configured to:

determine a maximum number of points displayable within the frame;

determine a number of points representative of a data quantity associable with each interval such that a proportion of the number of points to the maximum number of points represents a relative magnitude of the first data quantity; and

contiguously display the number of points in the frame for each of the intervals.

80. (Previously Presented) The system of Claim 73, wherein the first representation comprises a perimeter boundable by a pair of contiguous rectangles, the pair of contiguous rectangles including a first rectangle and a second rectangle having a different area than the first rectangle.

81. (Previously Presented) The system of Claim 73, wherein the first data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement.

82. (Currently amended) The system of Claim 73, wherein:

~~the identifying means can also~~ identifier is further configured to identify a second data characteristic to be identified for data the associate with the number of intervals in the period;

the data mining system is further configured to mine the body of data to identify a number of second significant intervals, the second significant intervals being intervals for which the second data characteristic is manifested in data associated with each of the second significant intervals; and

the display apparatus is configured to present in the frame associated with each of the second significant intervals a second representation of the data indicative of the second data characteristic.

83. (Original) The system of Claim 73, wherein the data indicative of the first data characteristic includes data representative of a plurality of data sources and the data representative of the plurality of data sources is presented using a unified representation format.

84. (Currently amended) A system for representing data associate with intervals, the computer-readable medium comprising:

~~means for associating a frame presenter configured to associate a frame with each of~~ a number of intervals in a period;

~~means for identifying an identifier configured to identify a first data characteristic to be~~ identified for data associate with the number of intervals in the period, the first data characteristic being based on a variation from an expected quantity;

a data mining system configured to mine the data to identify a number of first significant intervals, the first significant intervals being intervals for which the first data characteristic is manifested in data associated with each of the first significant intervals;

a representation ~~means for determiner configured to:~~

~~determining determine~~—a maximum number of points displayable within the frame;

~~determining determine~~—a number of points representative of a data quantity
associable with each interval such that a proportion of the number of
points to the maximum number of points represents a relative magnitude of
the first data quantity; and

contiguously ~~displaying display~~—the number of points in the frame for each of the
intervals; and

a display apparatus configured to present in the frame associated with each of the first
significant intervals a first representation of the data indicative of the first data
characteristic, wherein the frame comprises a rectangular area and wherein the
first representation comprises one or more rectangular columns adjacently
disposed within at least a portion of the rectangular area, the one or more
rectangular columns having a first visual characteristic.

85. (Previously Presented) The system of Claim 84, wherein mining the data
includes identifying at least one streak having a plurality of adjacent first significant
intervals.

86. (Previously Presented) The system of Claim 84, wherein the expected quantity
includes at least one of an expected number, an expected range, a control limit, and a
standard deviation.

87. (Previously Presented) The system of Claim 85, further comprising:

identifying a second data characteristic for time-related data based on a second
variation from the expected quantity;

mining the time-related data to identify a number of second significant intervals for which the second data characteristic is manifested in time-related data associated with each of the second significant intervals; and

presenting in the frame associated with each of the second significant intervals a second representation of the time-related data indicative of the second data characteristic, wherein the second representation comprises one or more adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic.

88. (Previously Presented) The system of Claim 87, wherein mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals.

89. (Previously Presented) The system of Claim 84, wherein variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the intervals varies from the expected quantity.

90. (Previously Presented) The system of Claim 84, wherein the first representation comprises a perimeter boundable by a pair of contiguous rectangles, the pair of contiguous rectangles including includes a first rectangle and a second rectangle having a different area than the first rectangle.

91. (Previously Presented) The system of Claim 84, wherein the display apparatus is further configured to present a first number of data points in a first format including at least one of a color and a fill pattern.

92. (Original) The system of Claim 91, further comprising a format selector coupled with the display apparatus, the format selector allowing a user to select the

first format.

93. (Currently amended) The system of Claim 84, wherein:

the identifying means can also ~~identifier is further configured to~~ identify a second data characteristic to be identified for data the associable with the number of intervals in the period;

the data mining system is further configured to mine the body of data to identify a number of second significant intervals, the second significant intervals being intervals for which the second data characteristic is manifested in data associated with each of the second significant intervals; and

the display apparatus is configured to present in the frame associated with each of the second significant intervals a second representation of the data indicative of the second data characteristic.

94. (Previously Presented) The system of Claim 84, wherein the first data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement.